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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/057,838	04/09/1998	ANTONY P. VAN DE VEN	5308-79DV	6831

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EXAMINER

WU, XIAO MIN

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 08/11/2004

14

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/057,838

Applicant(s)

VAN DE VEN ET AL.

Examiner

XIAO M. WU

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 17-43 and 49-64 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-29 and 49-53 is/are allowed.
- 6) ☒ Claim(s) 30,35-41,43,54,59-62 and 64 is/are rejected.
- 7) ☒ Claim(s) 31-34,42,55-58 and 63 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

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evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 30, 35-39, 41, 43, 54, 59-62 and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (US Patent No. 5,583,351) in view of Tischler (US Patent No. 5,661,074).

As to claims 30, 54, Brown: a light emitting diode (LED) that emits in the blue region of the visible spectrum (13c, Fig. 5a)); a light emitting diode (13b, Fig. 5a) that emits in the green region of the visible spectrum and adjacent the blue LED; a light emitting diode (13c) that emits in the red region of the visible spectrum, and adjacent to the blue LED and the green LED. It is noted that Brown does not specifically disclose that the blue or green light emitting diode comprising a silicon carbide substrate and a group nitride active layer.

Tischler is cited to teach a LED device in which the blue or green light emitting diode comprising a silicon carbide substrate and a group nitride active layer (col. 4, lines 58-67). It would have been obvious to one of ordinary skill in the art to have modified Brown with the features of the blue LED structure as taught by Tischler because Tischler provide can provide a bright green-blue-to-ultraviolet light emitting optical device (col. 4, lines 58-60).

As to claims 35, 59, Tischler discloses group III nitride active layer comprising gallium (col. 4, line 61).

As to claims 36, 37, 60, 61, Tischler discloses that the green LED comprises a silicon carbide substrate and a group III (e.g. gallium) nitride active layer (col. 4, lines 58-67).

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As to claims 38, 39, Brown discloses that the green LED comprises a gallium phosphide (col. 3, lines 5-6).

As to claims 41, 62, it is inherent to apply different voltage to the red, green and blue LEDs according to the display data.

As to claims 43, 64, Brown further discloses that the values of the emission wavelengths are usually to satisfy the CIE chromaticity diagram, in order to produce a good "white" color (col. 9, lines 64-67).

5. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (US Patent No. 5,583,351) in view of Tischler (US Patent No. 5,661,074) as applied to claims 30, 35-39 above, and further in view of Camras et al. (US Patent No. 5,115,286).

It is noted that both Brown and Tischler do not disclose the group III phosphide comprises aluminum indium gallium phosphide (AlInGaP). Camras is cited to teach a LED device includes the group III phosphide comprises aluminum indium gallium phosphide (AlInGaP, see col. 6, line 62). It would have been obvious to one of ordinary skill in the art to have modified Brown as modified with the features of the AlInGaP for LED as taught by Camras because the AlInGaP can be formed in a transparent substrate.

***Allowable Subject Matter***

6. Claims 17-29, 49-53 are allowed.

7. Claims 31-34, 42, 55-58, 63 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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***Response to Arguments***

8. Applicant's arguments with respect to claims 30, 35-41, 43-48, 54, 59-62 and 64 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xiao Wu whose telephone number is (703) 305-4721.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (703) 305-4709.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231


**or faxed to:**

**(703) 872-9306**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377

xw  
August 8, 2004

  
**XIAO WU**  
**PRIMARY EXAMINER**  
**ART UNIT 2674**